



# **Stream and Wetlands System Protection Policy**

## **Public Workshop and CEQA Scoping Meeting**

*San Francisco Bay Regional Water Quality Control Board May, 2006*

# Meeting Outline

- I. Basin Planning Process, Purpose of CEQA Scoping, and Policy Need  
(Shin-Roei Lee)
- II. Stream and Wetlands System Science, and Proposed Policy  
(Ben Livsey)
- III. CEQA Scoping  
(Shin-Roei Lee)



# Basin Planning Process

# **San Francisco Bay Regional Water Quality Control Board**

Lead state agency responsible for protecting  
water quality in Bay Area

## Authorities:

- The Federal Clean Water Act
- California's Porter-Cologne Water Quality Control Act
- The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan)

# Basin Planning Process Summary



- CEQA Scoping
- Proposed Policy and Staff Report
- Public Review and Comment
- Public Hearing and Regional Water Board Adoption
- State Board, OAL, and U.S. EPA Approval

# Purpose of CEQA Scoping

- Determine extent, focus, and content of environmental analysis
- Identify:
  - Issues to eliminate from environmental analysis
  - Alternatives
  - Methods of assessment
- Receive public comments (due May 31<sup>st</sup>)



# **CEQA Scoping Environmental Factors**

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

# Stream Factors

- Flood Control and Drainage
- Erosion and Sedimentation Control
- Water Supply and Groundwater Recharge
- Water Quality
- Habitat and Environment
- Recreation and Public Access
- Land Use and Housing
- Stable and Natural Channels



# Policy Need



# Areas for Improvement

Establish an integrated policy which links and guides existing permit programs under a common framework



# Areas for Improvement

1. More explicitly acknowledge connection between physical integrity of stream system and water quality
2. Expand consideration of cumulative effects
3. Improve success of wetland and riparian mitigation
4. More consistent and predictable permitting outcomes
5. Advance policy to reflect best practices and science

The background of the slide is a photograph of a natural landscape. On the left, a calm stream flows through a wetland area, with tall green grasses and reeds growing along its banks. The water reflects the sky. To the right of the stream, there is a grassy field. In the far distance, a range of low mountains is visible under a cloudy sky. A large, solid blue rectangle is superimposed over the center of the image, containing the title text in white.

# **Stream and Wetlands System Science**

# The Stream and Wetlands System



**WETLANDS**



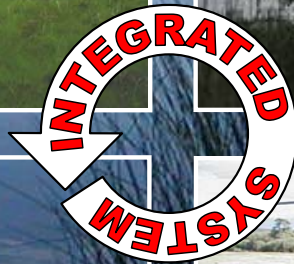
**FLOODPLAINS**



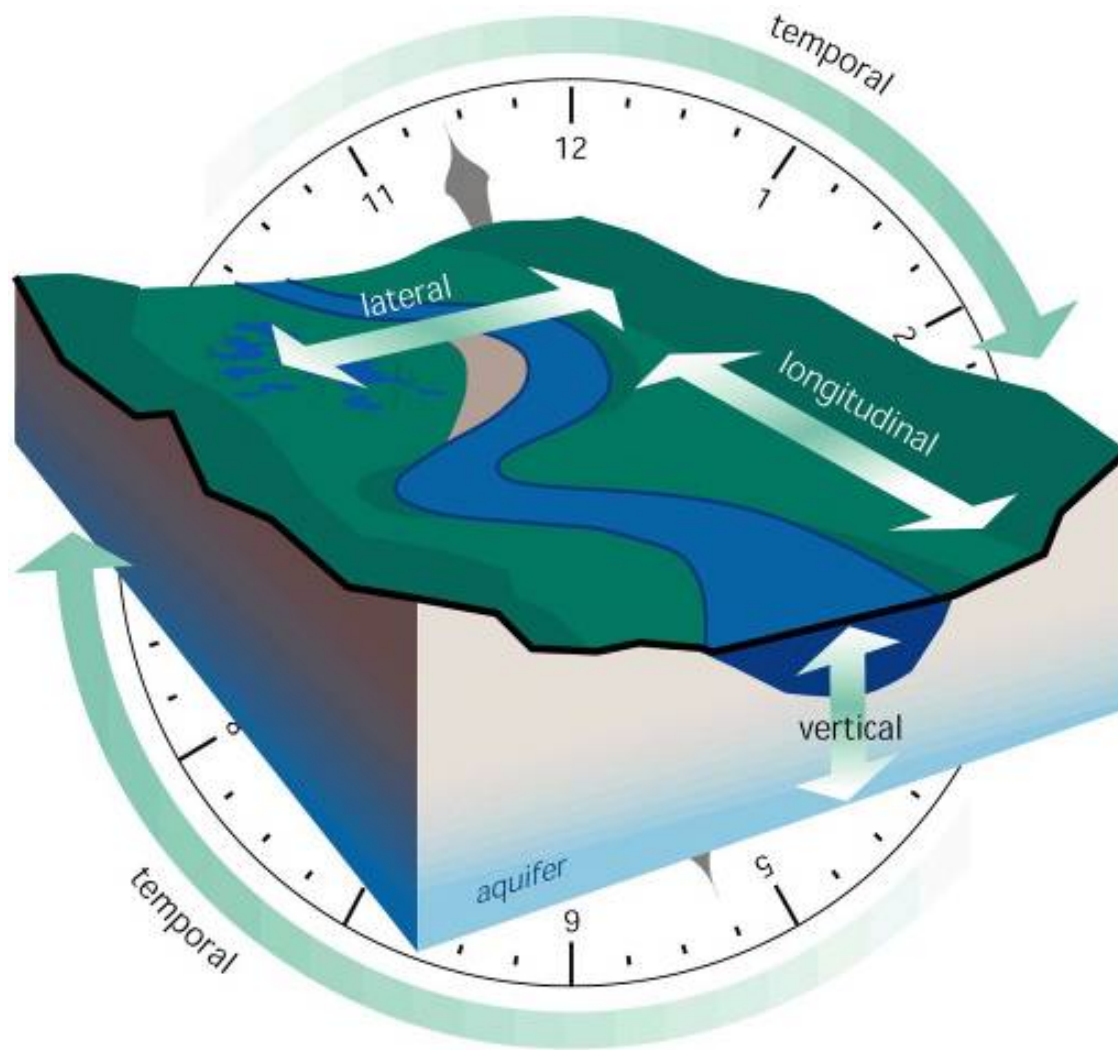
**STREAM CHANNELS**



**RIPARIAN AREAS**



# Stream and Wetlands System Dimensions



Four Dimensional  
Framework

Longitudinal

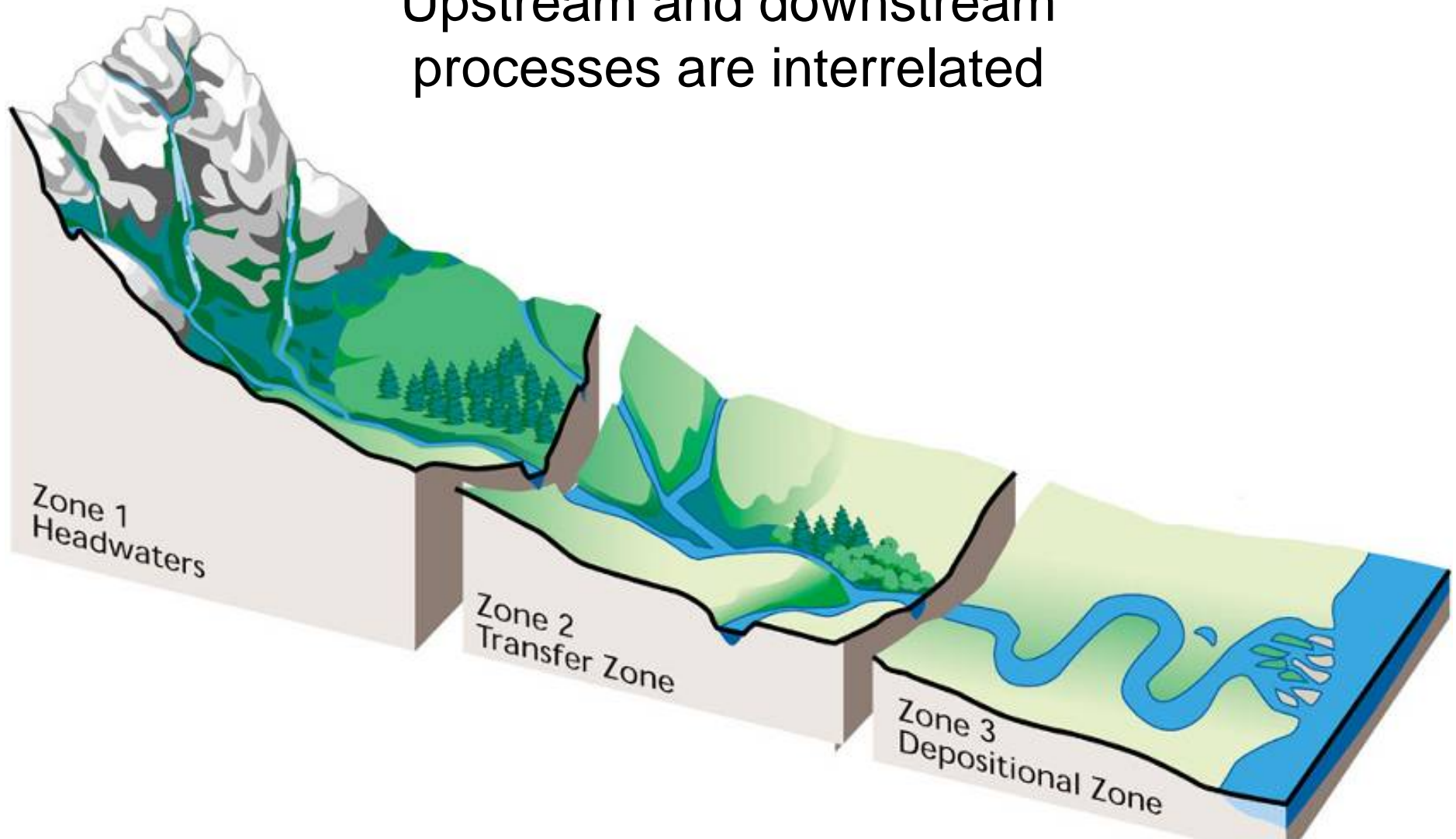
Lateral

Vertical

Temporal

# Longitudinal Dimension

Upstream and downstream processes are interrelated



# Longitudinal Corridors

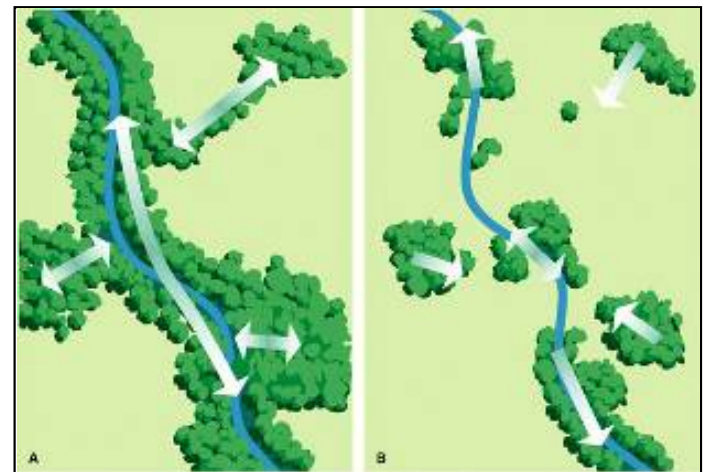
## Riparian / Stream Corridors

Natural conditions can support a continuous band of riparian vegetation



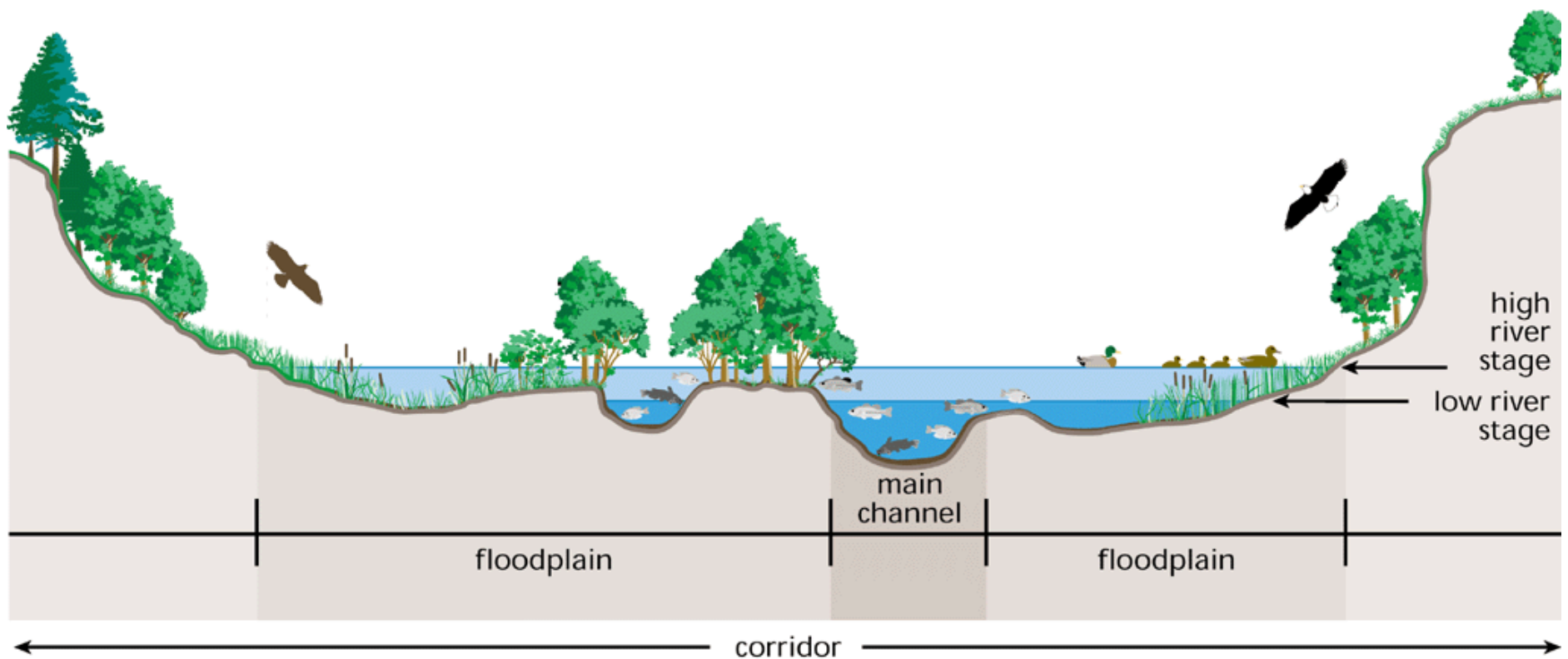
### Riparian Functions:

- Bank Stability
- Water Quality Enhancement
- Flood Water Storage
- Fish and Wildlife Habitat



# Lateral Dimension

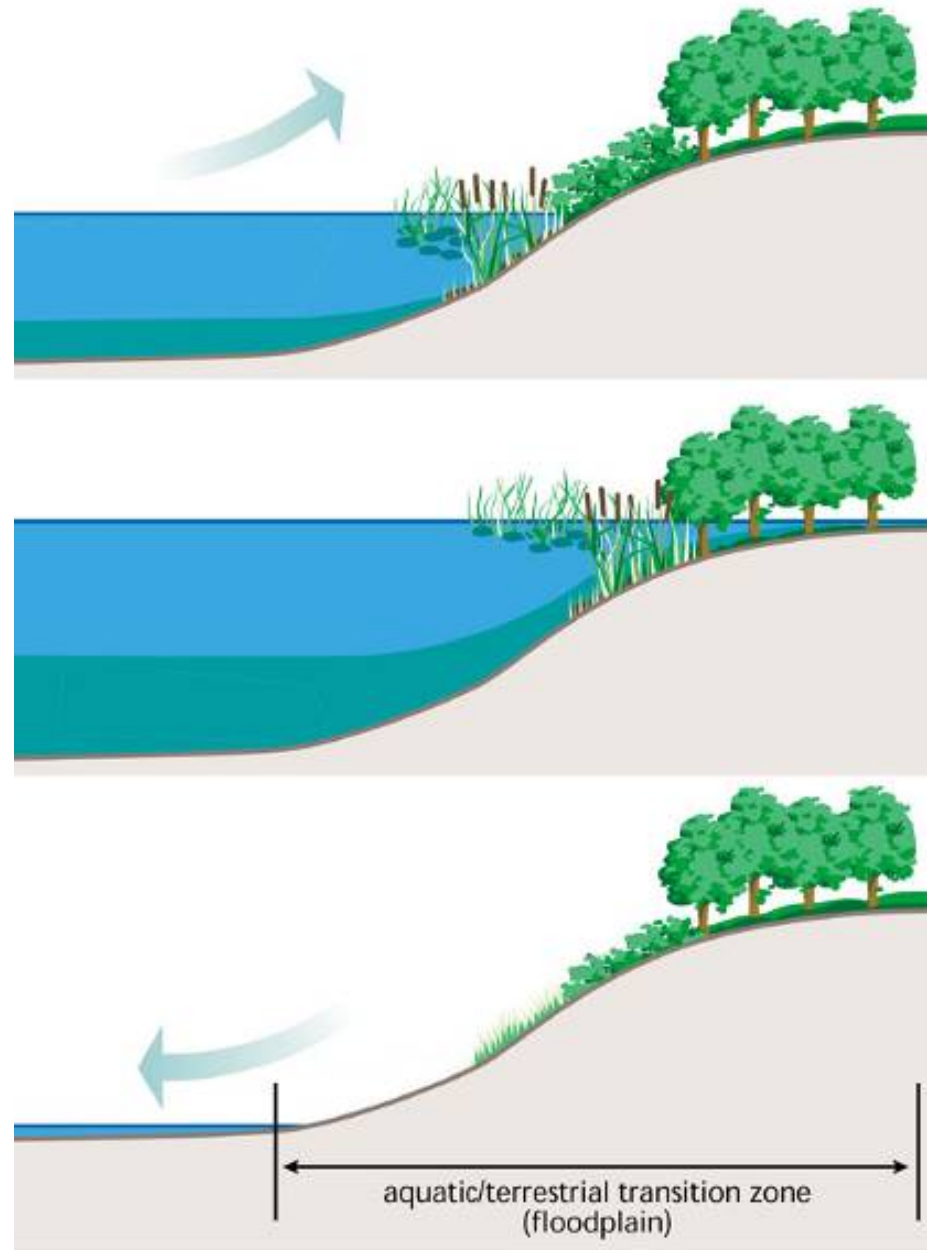
Stream and wetland system elements connected during ordinary and/or flood flows



# Lateral Processes

## The Flood Pulse

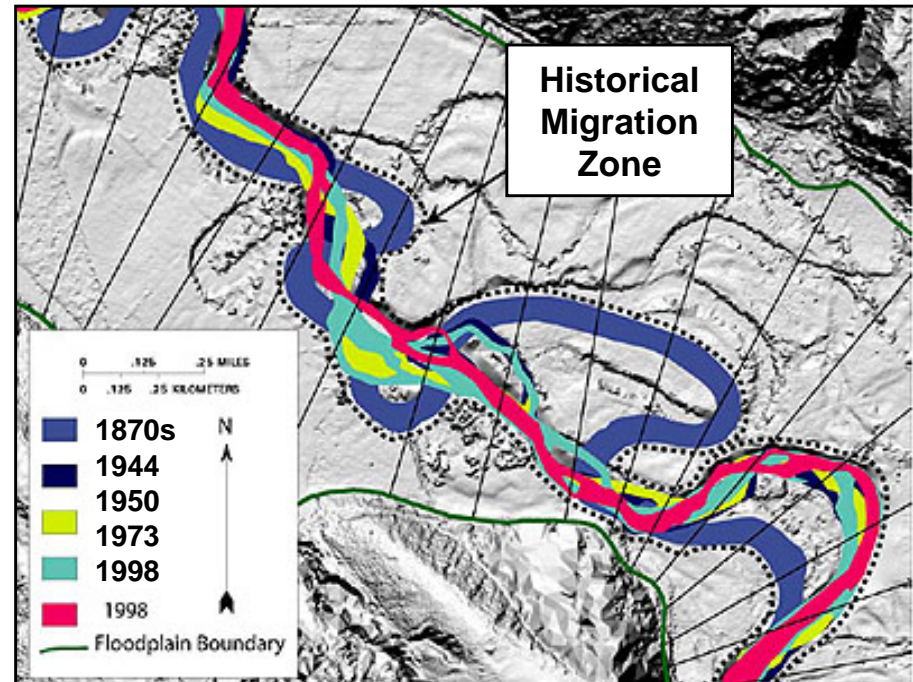
Periodic flooding promotes energy and nutrient exchange



# Lateral Processes

## Riparian and Floodplains Functions:

- Flood Water Storage
- Water Quality Enhancement
- Channel Migration

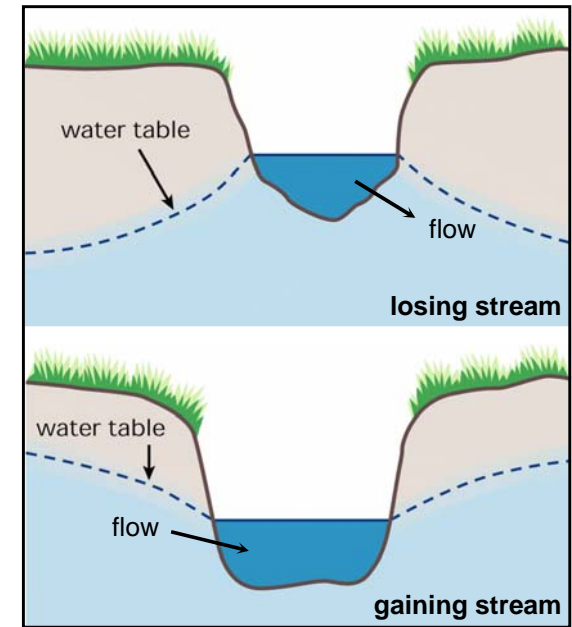
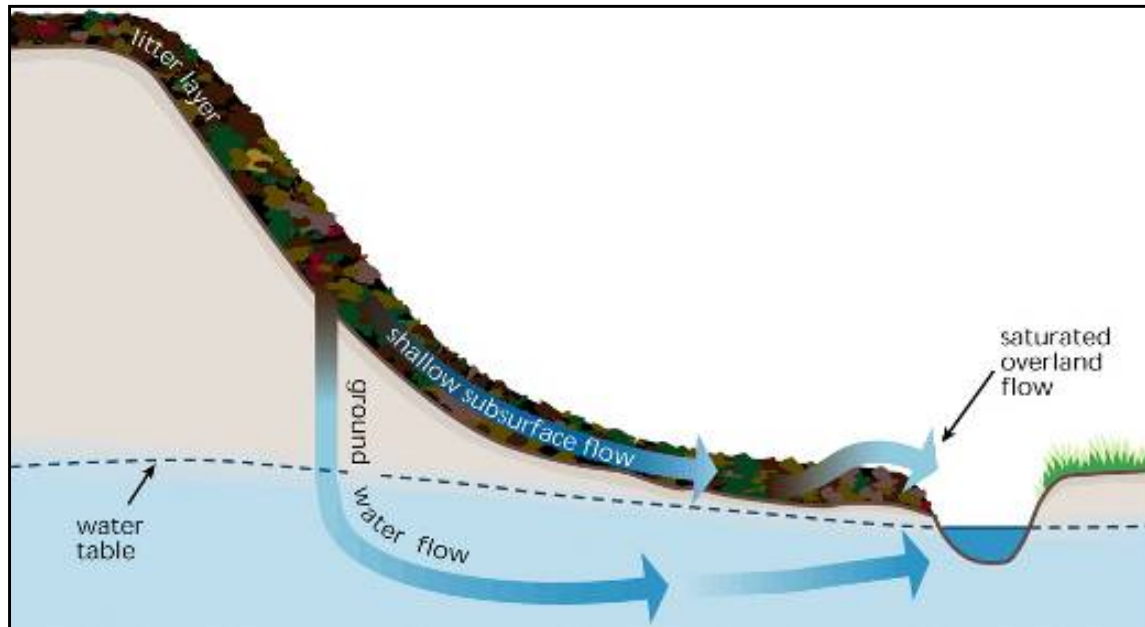


# Excessive Erosion/Deposition



# Vertical Dimension

Subsurface flows connect uplands with the stream channel



# Temporal Dimension

Dynamic systems undergoing seasonal and inter-annual changes



# Water Quality Functions

- Water Quality Enhancement
- Energy and Nutrient Cycling
- Temperature and Microclimate Control
- Fish and Wildlife Habitat
- Large Woody Debris Input
- Streambank Stability
- Channel Migration
- Sediment Transport and Storage
- Flood Peak Attenuation/ Flood Water Storage
- Groundwater Recharge

# Community Benefits

- Open Space
- Recreation
- Higher Property Values



The background of the slide is a photograph of a natural landscape. It shows a stream or wetland area with green grass and some water. In the distance, there are hills or mountains under a clear sky. The image is slightly blurred, giving it a soft, natural feel.

# **Stream and Wetlands System Science Summary**

- Stream and wetlands systems are dynamic in space and time
- Their chemical, physical, and biological processes are connected across the longitudinal, lateral, and vertical dimensions
- Protected and restored systems provide valuable water quality functions



# Proposed Policy Framework

# Proposed Amendment Concepts

- Protect and restore the physical characteristics of stream and wetlands systems, including their connectivity and natural hydrologic regimes
- Clarify that stream and wetlands system protection and restoration are viable forms of pollution prevention in all land use settings
- Integrate stream and wetlands system protection into the watershed water quality management strategy

# Potential Policy Framework

## BENEFICIAL USES

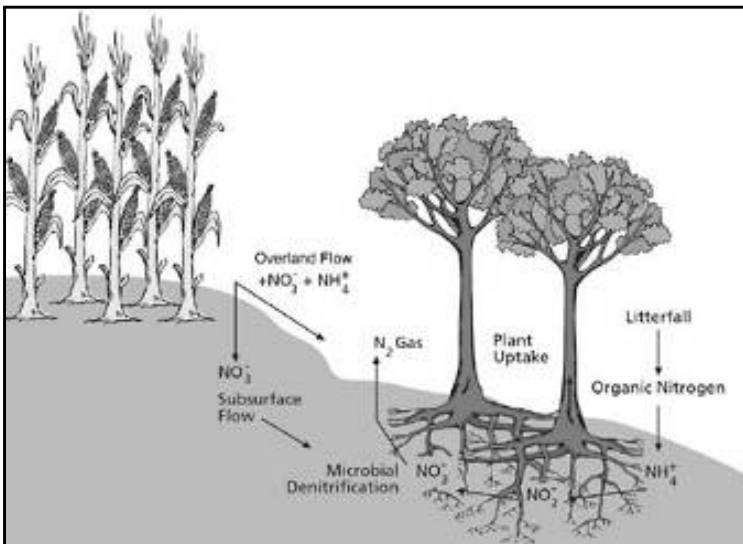
- Define functional relationships between stream system elements and describe scientifically the importance of each in protecting water quality
- Develop function-based beneficial uses of wetlands, riparian areas, and floodplains
  - Water Quality Enhancement
  - Flood Peak Attenuation/Flood Water Storage
  - Wetland Habitat

# Potential Policy Framework



## Additional Beneficial Uses

- Flood Peak Attenuation / Flood Water Storage
- Water Quality Enhancement
- Wetland Habitat



# Potential Policy Framework

## Water Quality Objectives

- To protect stream system elements and the dynamic structure and function between these elements

## Implementation Plan

- Offer solutions to protect water quality, which may include specific measures as justified
- Describe methodology to avoid, minimize, and mitigate impacts on a watershed or project-specific basis
- Promote local jurisdictional development and implementation of watershed management plans

# Next Steps

- CEQA Comment Period (ends May 31<sup>st</sup>)
- Follow-up Meetings
  - Field Visits (Summer '06)
  - Policy Update (Fall '06)
  - Staff Report Workshop (Spring '07)
- Public Review and Comment Period
- Regional Water Board Public Hearing (Fall '07)

# Information

Contact Ben Livsey at (510) 622-2308 or  
[blivsey@waterboards.ca.gov](mailto:blivsey@waterboards.ca.gov)

Visit the Policy website:  
[http://www.waterboards.ca.gov/sanfranciscobay/  
index.htm](http://www.waterboards.ca.gov/sanfranciscobay/index.htm)

Subscribe to the Policy email list:  
[http://www.waterboards.ca.gov/lyrisforms/reg2\\_subscribe.html](http://www.waterboards.ca.gov/lyrisforms/reg2_subscribe.html)



# CEQA Scoping

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